I

THE FEDERAL ROLE IN WATER RESOURCES MANAGEMENT: ADMINISTRATIVE POLITICS IN A FEDERALIST STATE

The Water Resources Development Act of 1986, more simply called WRDA-86 (P.L. 99-662), signifies major and probably enduring shifts in the nation's attitude toward water resources planning. The legislation reflects general agreement that non-federal interests can, and should, shoulder more of the financial and management burdens, that environmental considerations are intrinsic to water resources planning, and that uneconomic projects must be weeded out. Especially in the last few decades, each of these points inspired intense debate and controversy. Their adoption in WRDA-86 resulted from a combination of political and economic factors that may not be repeated in the foreseeable future.

WRDA-86 authorized about $16 billion in spending for water projects, of which the federal government will pay approximately $12 billion. Nonfederal interests, such as states, port authorities, commercial navigation companies, and communities will pay the remainder. The law authorized 377 new Army Corps of Engineers water projects for construction or study. This included 43 port projects, 7 inland waterway projects, 115 flood control projects, 24 shoreline protection projects, and 61 water resources conservation and development projects (such as for fish and

wildlife mitigation). In addition, the act authorized 38 studies, 63 project modifications, and 26 other miscellaneous projects and programs.

Though the number of projects and studies authorized in WRDA-86 is significant, of potentially more importance are the policy changes that the act introduced. Together they may substantially modify approaches to financing and planning water developments that evolved over the last half century. Revisions in cost-sharing requirements, the imposition of ad valorem cargo taxes to maintain harbors, increases in fuel barge taxes to support inland lock and dam projects, and various other reforms should result in greater participation by ports, communities, waterway interests, and states in both the financing and designing of water projects. Many of these reforms are hardly revolutionary. Indeed, in putting more initiative in the hands of nonfederal interests, the act is profoundly conservative, for it restores a relationship that existed over a century ago. To understand the real importance of WRDA-86, the partnership between federal and nonfederal interests must be understood in its historical context.

Evolution of the Federal Role in Water Resources Development

Since this nation's beginning, federal, state, and local governments have cooperated in developing water resources. In the early 19th century, private and state interests generally initiated water projects, but the federal government occasionally provided assistance through land grants, stock purchases, or direct appropriations. Another form of assistance, perhaps underestimated in its importance, was the use of Army Engineers to help survey and construct navigation projects at a time when there were few native civilian engineers. Secretary of Treasury Albert Gallatin's 1808 "Report on Roads and Canals" provided a blueprint for cooperative efforts, and a decade later Secretary of War John C. Calhoun tried to convince Congress of the necessity of federal involvement in developing the nation's waterways.' Calhoun and his congressional supporters did not agree with those who believed that the federal system involved separate and distinct levels of government. Rather, they thought of it as a partnership in which federal, state, and local authorities worked together for the common good.[2]

Still, federal assistance for "internal improvements" evolved slowly and haphazardly, the product of contentious congressional factions and an executive branch generally concerned with avoiding unconstitutional federal intrusions into state affairs. Although Calhoun did not persuade Congress to embrace a wholehearted

commitment to internal improvements, western congressmen constantly reminded their legislative colleagues about the importance of such projects both for commercial and military purposes. Finally, in 1824, led by the redoubtable Henry Clay of Kentucky, they had their day. On 30 April 1824, the General Survey Act became law.[3]

This modest act befitted an administration and Congress generally willing to support legislation that promised much but committed very little federal funding. It authorized the President to have Army Engineers survey road and canal routes (but not rivers) deemed of national importance for commercial, military, or postal service purposes. Congress provided $30,000 to cover expenses.[4] The act portended a great national program of internal improvements, but the federal role was actually quite limited. The legislation was for planning only; no money was appropriated for construction. That important step occurred three weeks later.

On 24 May 1824, President Monroe signed a bill that appropriated $75,000 to. improve navigation on the Ohio and Mississippi rivers. The act empowered him to employ "any of the engineers in the public service which he may deem proper" and to purchase the "requisite water craft, machinery, implements, and force" to eliminate various obstructions.[5] While providing navigation channels on the Ohio and Mississippi rivers was certainly of substantial potential military value, there is little question that this act was passed in response to the urging of western politicians who were interested primarily in commercial expansion. In the next 14 years, rivers and harbors acts were

passed regularly that extended Corps of Engineers survey and construction work to hundreds of projects.

By the time the Civil War began, the federal contribution to river, harbor, and canal improvements amounted to about $17 million in appropriated monies. Some 4.6 million acres of public lands were given for canal improvements and another 1.7 million acres for river improvements. Land grants under the 1849 and 1850 Swamp Land acts and the 1841 land grant act totaled about 73 million acres. While these grants and appropriations were significant, they represented a modest amount of aid compared with state and private-interest contributions, which by 1860 totaled well over $185 million for canals alone.[6]

Many of the nation's ports and navigable waterways markedly deteriorated during the Civil War, due to both military action and wartime budgetary constraints. Therefore, after the war Congress authorized a great deal more money for rivers and harbors improvements. The federal government also took over bankrupt canal companies, and the Corps of Engineers became the custodian of many former private or state waterways. Thus began federal domination of rivers and harbors work. Between 1866 and 1882, the President signed 16 rivers and harbors acts. The 1866 act appropriated $3.67 million, while the 1882 act appropriated fives times as much. By that year, the federal government had spent over $111 million for rivers and harbors projects.[7]

All this money was not appropriated without controversy. Whereas before the Civil War federal financial contributions

focused on major inland and coastal harbors and the important rivers that served as "public highways," much of the money appropriated after the Civil War aided local development with questionable national benefits. Railroad competition also raised questions about the future of waterway transportation. Partly in response to these questions, in 1872 Congress created a Select Committee on Transportation Routes to the Seaboard. Composed eventually of nine senators, the committee was headed by Senator William Windom of Minnesota and was known popularly as the Windom committee. Its 1873 report promoted waterway over railway transportation wherever waterways were "properly located."[8] Of more relevance here is the committee's conclusion (on a five to four vote) that the sum of local rivers and harbors projects contributed to the national interest.' Generally accepted by Congress, this conclusion justified federal largesse for waterway improvements. The result was the authorization of dozens of dubious projects. By 1907, the cumulative total for rivers and harbors appropriations was more than four times the 1882 figure: the federal role in navigation improvements continued to grow.

Scientific Manasement and Consressional Prerogatives

Only at the beginning of the 20th century was the congressional approach to rivers and harbors projects seriously questioned, most notably by Ohio Representative Theodore Burton, chairman of the Rivers and Harbors Committee. Burton opposed the

"pork barrel" legislation that had become prevalent in Congress. In one effort to eliminate marginal projects, in 1902 he successfully promoted in 1902 the establishment of a Board of Engineers for Rivers and Harbors within the Corps of Engineers to review the feasibility of rivers and harbors projects recommended by lower levels of the Corps. However, he was convinced that cost sharing, not governmental review, would be the best way to ensure the merit of projects; he wished to have nonfederal interests assume as much of the financial burden as possible. On a case-by-case basis, some local financial contribution for rivers and harbors projects would be levied. The Corps of Engineers generally supported Burton's initiatives to ensure the economic viability of projects, but the Corps' relationship with Burton was complex. His general skepticism about the value of inland waterway improvements was clearly contrary to the Corps' long-held belief in the paramount importance of inland and coastal navigation."

Thanks to Burton's endeavors, dozens of rivers and harbors projects requiring local contributions were authorized in the first two decades of the 20th century. Nevertheless, no standard procedure was developed to determine which projects should entail local contributions. A small step was taken in that direction in 1920, when Congress inserted a clause in the annual appropriations bill requiring Army Engineers to report the local and general benefits of a project and to recommend whether local cooperation should be required.[11] In other words, Congress wanted the engineers to determine the issue, even though such economic

assessments necessarily involve political judgment. Five years later, Congress discontinued the policy of local cooperation for small navigation projects and declared a new policy: whenever local interests advance funds for rivers and harbors work, such may be accepted and expended by the Secretary of War "in his discretion." Regardless, the Secretary was "hereby authorized and directed to repay without interest . . . the moneys so contributed and expended."[12] By this time, a new procedure for appropriating rivers and harbors funds had been established. Rather than being considered separately, the appropriations were included in the Army appropriations bills. Once the appropriation was approved, the Secretary of War and the Chief of Engineers apportioned the funds as they thought best. Under this procedure, which continued until the New Deal, annual appropriations for rivers and harbors work ranged from $40 million to $60 million.

The use of cost sharing to eliminate questionable projects from authorization bills generally failed. Instead of causing congressmen to ascertain the financial capability of their constituents prior to supporting a project, the local cooperation requirement actually encouraged congressmen to approve projects of marginal worth. Politically, they could hardly lose. By voting for the projects, they showed themselves sensitive to constituent needs and desirous of having their district or state share in the reallocation of the federal budget. They could leave it to market forces to determine whether the project was actually constructed.

Although local communities and levee districts continued to

shoulder much of the burden for flood control, the federal role in navigation improvements continued to grow in the first decades of the 20th century.[13] What was disputed was the proper role of Congress and the executive branch in discharging the federal responsibility. Burton's reform measures were not simply an attempt to rationalize rivers and harbors improvements, but to ensure that legislative powers, sensibly constructed, remained with Congress. Consequently, he opposed some of the conservationist proposals of the Theodore Roosevelt administration, which usually involved additional executive branch involvement. These proposals focused on the institutional machinery required to administer multipurpose plans: coordinated *river* basin programs to address equitably and efficiently a wide variety of needs, including navigation, flood control, irrigation, water supply, and hydropower. Management was to be rational and scientific. To most conservationists, this meant the appointment of a commission of experts to design projects in a professional, apolitical fashion. Many recommendations called for the commission to be in the executive branch or subject to presidential appointment. While supporting multipurpose planning, Burton considered outside or executive branch commissions to be usurpations of Congressional authority and energetically opposed them.[14] The problem was to reappear periodically for the next 50 years: how to reconcile rational planning--scientific management--at the federal level with the legislative prerogatives that Congress carefully guards.

Senator Francis G. Newlands of Nevada proposed just the kind

of commission Burton feared, with powers to authorize public works and to provide funds. Not surprisingly, the majority of Congress shared Burton's opposition to this idea. However, Burton supported a substitute bill specifying that the commission would act only "as authorized by Congress." The bill won overwhelmingly in the House, but Newlands' colleagues killed it in the Senate in 1908.[15] The conflict over institutional arrangements continued. The issue was not federal domination; neither Burton and his allies nor Theodore Roosevelt and the conservation community proposed greater local control of projects, but only, in Burton's case, greater financial involvement. The controversy focused on proper administration and policy-making within the federal establishment --whether Congress or the executive branch should have the final word. This controversy endured into the post-World War II era and was shaped partly by external factors including war and the Depression.

The 1917 Rivers and Harbors Act actually authorized a waterways commission composed of seven presidential appointees. But President Woodrow Wilson never made any appointments, and Newlands' death in 1919 eliminated the act's major champion. In 1920, Congress repealed the waterways commission and instead established a Federal Power Commission. Rational, apolitical, multipurpose management appeared doomed. The National Rivers and Harbors Congress (founded in 1902), the National Reclamation Association (founded in 1933), and federal power advocates occasionally appealed to multipurpose concepts, but generally only

to provide justification for navigation, irrigation, and public power projects, respectively. Certainly, this was not the scientific planning envisioned by multipurpose advocates, but rather log-rolling politics on a grander scale than ever, only garnished with the rhetoric of scientific planning.

Although multipurpose planning was at the mercy of special-interest lobbying, Congress fitfully embraced some of its ideas. Coordinated approaches to river development were most successful when they answered interstate economic requirements. These requirements became pressing at the beginning of the 20th century as a result of two unrelated developments: agricultural development in the West and the growing demand for electrical energy throughout the country. The first development called for institutional, technological, and legal arrangements to allocate scarce water supplies throughout the West.[16] The second called for the harnessing of the nation's rivers to produce hydropower. The two developments coalesced in 1922, when the states in the Colorado River basin (except Arizona, which joined in 1929) signed the Colorado River Compact. Congress ratified the compact in December 1928 and also authorized the building of the first great multipurpose dam in the Black Canyon of the Colorado: Boulder Dam.[17] This initiated the era of large multipurpose dams and of regional compacts designed to make efficient use of the nation's rivers. Generally, these regional arrangements mirrored hardheaded political realities more than farsighted planning. When Boulder Dam was authorized, few thought in terms of basin-wide development

of the Colorado or anticipated a string of dams stretching from the Rocky Mountains nearly to the Mexican border. In their dependence on the Bureau of Reclamation or the Corps of Engineers to build the projects (and hence on Congress for authorizations and appropriations), state officials also confirmed the continuing federal domination of water resources programs.

Another manifestation of multipurpose planning occurred in 1925, largely at the urging of hydropower interests. That year Congress authorized the Corps of Engineers and the Federal Power Commission to prepare cost estimates for surveys of navigable streams and tributaries "whereon power development appears feasible and practicable." The aim was to develop plans to improve stream navigation "in combination with the most efficient development of the potential water power, the control of floods, and the needs of irrigation."[18] The Corps responded with a recommendation for 24 surveys at an estimated cost of $7.3 million. In 1927 Congress appropriated the necessary funds, whereupon the Corps launched a series of comprehensive river surveys. The resulting reports became known as the 308 reports after the House Document in which the survey estimates had first appeared. They became basic planning documents for many of the multipurpose projects undertaken by the federal government just before and after World War II and still are invaluable aids for water resources developers. In 1935, Congress authorized the Corps to supplement the "308" reports with studies "to take into account important changes in economic factors as they occur and additional stream-flow records or other factual

data."[19] This authority charged the Corps with a broad responsibility to undertake continuing river basin planning, with the emphasis on navigation and flood control.

Flood control was a relatively new mission for the Corps. Until 1917, all federal rivers and harbors projects had been justified, at least in part, as aids to navigation, a federal responsibility under the Commerce clause of the Constitution. However, in 1917 Congress passed the first flood control act, which authorized flood control expenditures of $45 million for the Mississippi River and $5.6 million for the Sacramento. Also, the act stipulated that local interests pay at least one-third the cost of construction and repair of levees and provide rights-of-way to the federal government. However, in the aftermath of a disastrous flood in 1927 along the lower Mississippi, Congress passed and President Calvin Coolidge signed the 1928 Flood Control Act, which authorized a new flood control plan for the lower Mississippi. In deference to the economic conservatism of President Coolidge, Congress reaffirmed the general principle of cost sharing. However, in light of repeated flood disasters and substantial financial burdens borne by lower Mississippi interests, Congress released residents there from all local cooperation agreements save those to maintain certain flood control works after completion and to provide rights-of-way.[20]

In the first quarter of the 20th century, expanding federal navigation and flood control responsibilities required increased cooperative efforts among federal, state, and local

governments. While such cooperation was possible at the project level, the growing number of constituent groups and political leaders involved in making decisions threatened hopes of a rational, nationwide approach to water resources development. Moreover, a ready pool of nonfederal engineers and a mushrooming federal public works budget added weight to the argument that states should rely more on their own resources. In short, financial, political, and professional arguments undermined support for centralized planning and scientific management.

Had there been widespread support for rational, nationwide water resources development, the Corps could possibly have assumed a role similar to that of the Office of Public Roads (OPR). It could have provided technical information, developed construction and engineering standards for water projects, and provided experts to help states and localities. The Corps' reputation would have depended more on its expertise rather than on projects completed.[21] However, unlike OPR, the Corps did not enjoy either professional or public consensus about its appropriate role. Moreover, at the turn of the century, public and private civil engineers increasingly questioned the Corps' competence. Some skepticism may have stemmed from professional jealousy, but legitimate professional differences existed.** Also, new constituencies had proven effective lobbyists in Washington, and they often pleaded for changes in Corps water project plans to benefit local interests. Certainly, far more than engineering questions were involved; the value placed on farmland or the cost

of human life are not easily resolved at the drafting table. Under these circumstances, scientific management was moot. Political, not scientific, criteria would guide the allocation of federal money.[23]

Federal Domination and Reaional Planninq

President Franklin Delano Roosevelt launched a major challenge to congressional powers in the water resources field during the New Deal. Roosevelt was an advocate of regional planning. He also favored some sort of planning guidance at the national level. He organized a National Resources Board--its name underwent several later changes--to coordinate the development of river basin plans. However, few of these plans significantly affected legislation, and Congress reasserted its authority in the 1936 Flood Control Act, a momentous law in the history of the nation's water resources development. The law recognized that flood control was a "proper activity of the Federal Government in cooperation with States, their political subdivisions, and localities thereof." It also stipulated that the federal government would not participate in any flood control project if the benefits did not exceed the costs. This policy marked the real beginning of comprehensive federal flood control work. The projects that the act and subsequent amendments authorized have literally changed the geography of the United States and have caused or contributed to substantial demographic shifts in the nation.

Three factors contributed to the passage of the 1936 legislation: (1) the urging by some politicians that the federal government increase its assistance to flood-prone communities, (2) the necessity for work relief during the Great Depression, and (3) the suffering and devastation caused by the spring floods of 1936. Indeed, the August 1935 national flood control bill passed by the House of Representatives, which would have appropriated some $400 million for a large number of flood control projects, was considered an "emergency measure" to provide work relief as well as to authorize construction projects. It did not pass in the Senate that year because of the large number of projects that some senators thought questionable. Instead, it was recommitted to the Senate Commerce Committee.[24]

Senator Royal Copeland, the senior senator from New York and chairman of the Senate Commerce Committee, became the bill's champion in the Senate. Working with Corps of Engineers officials, he produced a new draft of the legislation in 1936 that provided for large amounts of work. Perhaps, the most sensitive question dealt with finances. Should the federal government assume the entire cost of flood control projects, as it had for the lower Mississippi River under the 1928 Flood Control Act? In the end, the congressmen agreed that local interests should provide lands, easements, and rights-of-way and should hold the United States free from damages due to construction. Later, another stipulation was added: local interests should maintain and operate all the works after project completion in accordance with regulations prescribed

by the Secretary of War. The three provisions--to provide lands, easements, and rights-of-way: to stand the cost of damages; and to maintain and operate the works--became known as the "abc" requirements.

By the time the Senate considered the flood control bill, a series of disastrous floods in the Northeast had intensified interest in the legislation. In March 1936, rain-swollen rivers had spilled over their banks from Maine to Maryland. These floods virtually ensured the passage of some sort of relief legislation. They also considerably increased the number of people hoping for full federal financing, but the local contribution requirement was absolutely essential to the bill's passage. The Senate finally approved the bill on 21 May, and the House passed it about three weeks later. The Water Resources Committee of the National Resources Committee complained that some projects in the bill were questionable, the bill abused sound conservation principles, and, in general, the legislation ignored multipurpose river development. The President no doubt shared these reservations. He had, for instance, endorsed the multipurpose planning mandated in the 1933 act that created the Tennessee Valley Authority. Nevertheless, he signed the bill into law on 22 June. Presumably, he hoped that he might be able to force some changes later, including obtaining a role for the Water Resources Committee in the selection of projects and the coordination of work. If so, his optimism proved ill founded. The act authorized the expenditure of $320 million for over 200 projects and a number of

examinations and surveys. Most of the work was to be done by the Army Corps of Engineers.

The 1936 act established flood control as a legitimate nationwide activity for the federal government, and it confirmed congressional control of the federal water resources program. But its immediate effect was to provoke protests from those who justifiably feared it threatened multipurpose planning and federal control of water development. The act, "ill-conceived and wretchedly drafted" according to one historian,[25] left many questions unanswered. Federal power interests believed that the abc requirements would preclude federal power development, especially if states were obliged both to operate and maintain flood control dams and to pay for additional construction costs for hydropower development. Clearly, such expenditures were beyond most state budgets. Confusing language in the act did not help matters. Section 3 stated that nonfederal interests "provide" rather than "convey" land to the federal government. The wording raised questions as to whether the United States actually owned title to the flood control dams, levees, and reservoirs.[26] In short, the nation's future power policy appeared to be left in the states' hands. The 1938 Flood Control Act was meant to remedy this situation. It authorized 100 percent federal financing of flood control reservoirs and channel improvements. Although the 1941 Flood Control Act made channel improvements again subject to the abc requirements, full federal responsibility for flood control reservoirs remained intact.

Had the abc requirements of the 1936 act remained in place, the nonfederal share for many flood control projects would likely have been similar to that specified by WRDA-86, which requires a 25 percent minimum local contribution. Both the 1936 and 1986 acts provided that local interests contribute lands, easements, and rights-of-way (WRDA-86 also requires that nonfederal interests provide dredged material disposal areas and necessary relocations). Both acts imposed a ceiling of 50 percent on local contributions toward total costs for flood control projects. However, the 1938 act put the future of water resources development directly in the lap of Congress.

The 1938 Flood Control Act did more than initiate a policy of full federal responsibility for flood control reservoirs. By providing-- some state governors would have said "imposing"--a federal answer to the question of how best to develop hydropower, it effectively mooted populist demands for regional power authorities, "little TVAs" in the words of Senator George *Norris* of Nebraska.[27] Both the 1936 and 1938 Flood Control Acts affirmed the general principle that flood control--like navigation--provided widespread benefits to the public and therefore should be funded from the federal treasury.[28] Such a principle reflected congressional intent to retain control of the planning and funding of water resources. Particularly in the face of the Great Depression, such an approach was appealing. In effect, Congress decided that the redistribution of public funds was in itself a contribution toward national economic development. There was no

Gallatin Plan or Windom committee report, and no report from the President's own National Resources Planning Board received serious congressional attention. Scientific multipurpose management enticed few politicians; policy was determined by the pocketbook.

In the words of one select committee on government organization, the flood control acts became a "legislative catch-all for all types of activities."[29] Water supply, drainage, irrigation, power generation, and navigation were all authorized under these acts, as subsequently amended. Much of this legislative activity was simply a convenience. Yet, the net effect was to make Congress the nation's water resources planner. Congress recognized this fact in the 1944 Flood Control Act and concurrently attempted to allay state concerns about the growing federal presence in the water resources field. It declared its policy was to "recognize the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control [and] . . . to facilitate the consideration of projects on a basis of comprehensive and coordinated development."[30] States were to be consulted and given an opportunity to review proposals. Still, congressional intentions were unclear. There was no express disavowal of earlier support of single-purpose projects, such as were authorized in the 1936 Flood Control Act. Indeed, a broad interpretation of the 1944 language could justify the authorization of marginal flood control projects that scarcely served flood

control but produced other benefits, such as hydropower or water supply.[31]

Critics not only charged that federal water resources agencies lacked commitment to multipurpose planning, but also that the agencies coordinated their plans poorly. Roosevelt-Truman era attempts to establish regional authorities for the Missouri and Columbia river basins died in Congress, while efforts to force better federal coordination through legislation achieved only modest success. Plans and policies continued to overlap, impeding any effort to develop integrated river basin plans. A Federal Interagency River Basin Committee, formed in 1943 to coordinate responsibilities, spawned regional interagency committees that included both federal and state representatives. These committees produced plans and policies, but were unsuccessful in their efforts to develop truly coordinated procedures, largely because there was no agreement on the goals of river basin planning. One subcommittee produced a report on Proposed Practices for Economic Analysis of River Basin Projects (1950) that provided nonbinding guidance to agencies on developing economic justification of water projects. The report, commonly called the "Green Book," was reissued with slight revisions in 1958. Still, coordination among agencies appeared haphazard at best, subject principally to congressional whim.[32]

Mainly in response to the enormous expansion of the executive branch during the Roosevelt administration, in 1947 Congress authorized the creation of the Commission on the Organization of

the Executive Branch of the Government, popularly known as the first Hoover Commission because it was the first of two headed by former President Herbert Hoover. Both President Harry Truman and Congress appointed members to the commission.[33] While the commission effected a number of major organizational changes in the executive branch, its influence in the water resources area was less tangible. It generated a valuable exchange of views and an impressive number of reports, but could not bring about significant changes. Members proposed the creation of drainage area commissions and a nonpartisan review board on water projects in the Executive Office of the President. An even more controversial recommendation was to transfer the civil works functions of the Corps of Engineers to the Department of the Interior. This initiative elicited intensive opposition from Corps supporters in Congress and went nowhere.[34] However, President Truman's own Water Resources Policy Commission, formed in 1950, seconded the commission's call for consolidation in water resources development and supported the establishment of river basin commissions.[35]

In 1953, the first year of the Eisenhower administration, the second Hoover Commission on the Organization of the Executive Branch of the Government was organized. Although its powers were broader than those of the first Hoover Commission, its procedures and organizational framework were similar. It also shared the earlier commission's disenchantment with existing water policies and administration. The second Hoover Commission severely criticized Congress and the executive branch for failing to develop

a comprehensive national Water resources policy and once more recommended that water resources development be "generally undertaken by drainage areas--locally and regionally."[36] Perhaps more accurately gauging the political climate, commission members dropped their predecessors' proposals to divest the Corps of its civil works functions and to create a nonpartisan review board in the Executive Office of the President. Instead, they recommended a cabinet level Federal Water Resources Board to oversee policy and to establish river basin planning (not administrative) 'boards that would include federal, state, and local interests.[37]

Another proposal that proved politically unpalatable was to charge user fees to carriers on the nation's commercial inland waterways. The intended purpose was to offset federal operation and maintenance (O&M) expenses. This recommendation, which sought to reverse the traditional policy of free navigation on the rivers of the United States, aroused bitter opposition from waterway users. Both the Corps of Engineers and a substantial number of congressmen likewise opposed the recommendation. Neither Congress nor the Corps was ready for user fees.[38] In the end, the second Hoover Commission had no more success than the first commission in directly changing federal water policy, although it contributed to a discussion that gained momentum both publicly and privately.

Partnership and Its Permutations

Some of the ideas of the two Hoover Commissions undoubtedly influenced the water resources policies of President Dwight D.

Eisenhower. Eisenhower stressed the need for "partnership," but with the stress on cost and operational efficiencies, not on scientific management. In his 1953 State of the Union Address, Eisenhower said, "The best natural resources program will not result from exclusive dependence on the Federal bureaucracy. It will involve a partnership of the States and local communities, private citizens and the Federal Government, all working together."[39] Undersecretary of the Interior Ralph A. Tudor (a former Army Engineer colonel and the builder of the Oakland Bay Bridge in San Francisco) felt strongly that "there has been a growing tendency to do away with local responsibility and local rights . . . I strongly believe that the local interests not only want but should have a strong part to play in determining how their part of the Nation should be developed."[40]

The Eisenhower administration's concept of partnership aimed to increase local responsibility, decrease strains on the federal budget, and eliminate uneconomic or otherwise undesirable projects. There are obvious similarities to President Ronald Reagan's policies 30 years later. Eisenhower particularly insisted on limiting the federal role in water power development. Support for small watershed projects was to be confined to technical, financial, and educational assistance. On the other hand, the federal government had to be prepared to assume major design and construction responsibilities whenever large multipurpose projects were justified but beyond the capability of nonfederal interests.[41]

Eisenhower appointed an Advisory Committee on Water Resources Policy whose permanent members were the Secretaries of Defense, Interior, and Agriculture. The committee urged that beneficiaries pay for projects in proportion to benefits. Harkening back to Hoover Committee recommendations, it also proposed the establishment of both a board of review for water projects in the Executive Office of the President and an advisory interagency committee on water resources.[42] Predictably, Congress was suspicious of both. Less controversial was the committee's encouragement of river basin agencies and interstate compacts.[43] However, Eisenhower tried to achieve his goals mainly through strict control of the federal budget (he vetoed three water bills, although one veto was overridden) and by establishing better federal coordination both in Washington and in regional river basin committees.[44] In both the Truman and Eisenhower administrations, Congress rejected presidential leadership, always fearing executive branch usurpation of legislative powers. The atmosphere was combative.

While the notion of partnership was implicit in many of the executive branch proposals of the 1950s, the most important step toward its realization came with the establishment of the Senate Select Committee on National Water Resources in 1959. Chaired by Senator Robert S. Kerr of Oklahoma, the committee held hearings throughout the country on a variety of subjects relating to water development. Its 1961 report stressed greater cooperation between the federal and state governments, more scientific research on

water, biennial assessment of water-supply demands, and greater promotion of water-development efficiencies, including nonstructural measures.[45] The report led to a number of developments in the water resources field. Senate Document 97 (1962) contained new interagency standards for water project planning. Drafted by the Secretaries of Interior: Agriculture: Army; and Health, Education, and Welfare at the request of President Kennedy, the document shows the influence of the Kerr committee report. The new standards required that all views be heard--federal, state, and local--prior to formation of project proposals. Multipurpose projects were to receive priority, and all projects were to be formulated in light of overall river basin plans. Recreation and water quality were to be considered as project benefits in the same way as navigation, hydropower, flood control, irrigation, water supply, watershed protection, and fish and wildlife enhancement.[46]

Consciously mimicking the language of the 1887 Hatch Act that established agricultural experimentation stations, Senator Clinton Anderson of New Mexico drafted a bill to authorize funds to set up water resources research institutes at state land grant universities.[47] The bill was enacted as the Water Resources Research Act of 1964 (P.L. 88-379). Anderson also helped draft the 1965 Water Resources Planning Act (P.L. 89-80), which was passed after the senator died. Building on the Kerr committee report, Anderson recommended passage of authorization to appropriate $5 million per year for ten years to each of the states to prepare

water development programs. This recommendation was eventually incorporated into Title III of the planning act.[48]

Meanwhile, the Kennedy administration drafted its own planning legislation. Officials in the Secretary of Interior's office lobbied for the creation of a new Department of Natural Resources, but the White House opposed this idea under the influence of such kitchen cabinet advisors as Richard Neustadt. The Harvard professor had argued in his book Presidential Power that competition among agencies strengthens the decision-making power of the President.[49] Following his reasoning, it made sense to keep responsibilities for water resources work divided among several agencies. While rejecting a new Department of Natural Resources, the administration did draft legislation to establish a water resources board. The administration bill changed the name to Water Resources Council; Title I of the 1965 planning act authorized its creation. The council was to be composed of federal agency representatives who would help establish river basin commissions, consult with federal and non-federal entities, develop standards and procedures for the operation of the commissions, and review state water and related land resources programs. upon the request of the council, Title II of the act authorized the President to establish river basin commissions composed of both federal and state representatives. One of the principal duties of such commissions was to "prepare and keep up to date, to the extent practicable, a comprehensive, coordinated, joint plan for Federal, State, interstate, local and nongovernmental development of water

and related resources."[50] This title directly resulted from some of the recommendations that had come from the Kerr committee and earlier executive branch reorganization studies in the Eisenhower and Truman periods.[51]

Federal grants to the states, the creation of river basin commissions, and the establishment of the Water Resources Council could all be construed as attempts to decentralize water policy. Such an interpretation, however, would be seriously misleading. The 1965 Water Resources Planning Act did not transfer power. It encouraged states to participate in the development of river basin plans, but final authority remained with Congress and the executive branch. Federal domination of water policy continued. None of those involved in drafting the legislation had envisioned anything different. The Kerr committee report had recommended that plans, once coordinated among federal, state, and local agencies, be submitted by the executive branch to Congress for authorization.[52] The 1965 legislation remained true to this formulation. Moreover, the Water Resources Council was an exclusively federal entity, and the river basin commissions were often dominated by representatives of federal water agencies. Most telling, the commissions were only planning agencies: they had no regulatory or enforcement authority.[53]

The Water Resources Planning Act of 1965 confirmed a basic truth about natural resources planning in the United States since the Civil War: the federal government is the moving force and any attempt to decentralize federal power--especially legislative

power--has met institutionalized, strongly entrenched, opposition.[54] Indeed, the Supreme Court in the 1963 Arizona v. California case affirmed that Congress even had the authority to distribute water from a federally constructed reservoir without abiding by state laws.[55] Thus, both judicial decisions and legislative statutes made clear the overriding federal interest in and authority related to navigation, flood control, power, and water allocation.[56] Whether passage of WRDA-86 will modify or reverse this historical pattern remains to be seen.

The water research and planning acts passed in 1965 had unintended consequences. Congress had seen fit to increase state professional capabilities and, in so doing, unwittingly strengthened the hand of opponents of federal domination.[57] By providing funds and encouraging greater attention to regional research and planning in water resources, the acts fostered the growth of expertise and expectations at the state level. Many who benefited from this federal assistance were among those who sought greater nonfederal participation in water resources planning in the 1980s. Design and construction management, once thought a burden better shouldered by large federal agencies, began appealing to states with sufficient expertise and funding. And while state officials still desired federal money, the many demands on the federal budget limited financial assistance. This created a situation in which sharing the funding and management burdens with nonfederal interests made good financial and political sense. The rhetoric of partnership could become reality.

Cost Sharing

In the political climate of the late 1960s, which had become more cautious and skeptical about federal public works projects, cost sharing was a popular topic of conversation. However, more enthusiasm was evident in the halls of Congress than in statehouses and city halls. The change is noteworthy: in the early 19th century, states and localities had petitioned the federal government for financial assistance. In the 1960s, when federal funding of large reservoir projects peaked, it was the federal government that sought financial relief from nonfederal interests. The beggar's hat had changed hands.

The Water Resources Council started a study of cost sharing in 1968 for major flood control reservoirs as well as for local protection works. The study continued into the next decade, but without resolution.[58] Meanwhile, water transfer problems in the Colorado River basin convinced the Bureau of the Budget of the need for a general examination of nationwide water resources issues and policies. Congress responded favorably in 1968 by authorizing a National Water Commission. The seven-member commission of experts received support from an outstanding professional staff as well as from outside consultants. The commission's final report, published in 1973, recommended that "Insofar as is practicable and administratively feasible, the identifiable beneficiaries of project services should bear appropriate shares of development and operating costs through systems of pricing or user charges. ..

."[59] Such a policy, the commission believed, would "provide incentives for the selection of-efficient projects that will lead to progress toward water resources policies that are in harmony with other national programs and policies."[60] The recommendations stressed philosophy and general criteria with the clear implication that nonfederal interests pay the cost of direct benefits. The commission further observed that nonfederal water projects also serve the national interest. Therefore, to provide financial incentives to produce the optimum design and operation, federal participation in such projects should be encouraged. The same cost-sharing policies should be used that apply to federal projects.[61]

The National Water Commission recommended that Corps of Engineers' capabilities be reserved for major projects. Small projects, essentially local in nature, should be left to local interests. The commission correctly predicted that the number of Corps major projects would "taper off," but placed too great a faith in the ability of river basin commissions to take over design and construction responsibilities formerly exercised by the Army Engineers.[62] In reality, the Corps* construction program declined because of budgetary constraints, environmental opposition, and the completion of many projects, not because of competition from river basin commissions. These commissions were simply not able to match the Corps' design and construction expertise.

In 1973, after extensive review by federal water agencies and Presidential approval, the Water Resources Council published its

Principles and Standards for Planning Water and Related Land Resources, pursuant to the 1965 Water Resources Planning Act. This document provided the basic framework for water resources planning for the next decade. It mandated that plans address two principal objectives: national economic development and environmental quality. The Principles and Standards or P&S defined three levels of studies: framework studies that study the water needs of a region on a broad basis, river basin plans to resolve complex problems identified in the framework studies, and implementation studies or feasibility reports.[63] However, one area in which the p&s was noticeably silent was cost sharing. The document simply noted that "current reimbursement and cost-sharing policies are being reviewed in their entirety. . . . Until this comprehensive review is completed and approved, all current reimbursement and cost-sharing policies are considered to be in full force and effect."[64]

Congress was not entirely pleased with the p&s. In the 1970 Flood Control Act (P.L. 91-611), Congress had specified in section 209 that the objectives of federal water resources projects should be to enhance (1) regional economic development, (2) quality of the total environment, (3) well being of the people of the United States, and (4) national economic development. Some members of Congress thought that the P&S insufficiently addressed these points, especially regional economic development.[65] Consequently, section 80c of the 1974 Water Resources Development Act (P.L. 93-251) reasserted these objectives and directed the Water

Resources Council to make another "full and complete investigation and study of principles and standards." This study was also to address questions dealing with the interest-rate formula and cost sharing.

The council published this second study in November 1975. The study compared cost-sharing arrangements in various federal water agencies and noted numerous inconsistencies. Not only did the reimbursement amounts for similar federal projects vary, but so did the repayment schedules, interest payments, and the division of O&M responsibilities. In a refreshingly candid statement, the authors admitted to "great difficulties in unraveling and understanding existing cost-sharing practices." They suggested that the problem could "best be described as an effort to dress the corseted and shy Victorian maiden in a bikini."[66] The study delineated various options for cost sharing but left final decisions to Congress.

Leaving cost sharing in congressional hands was just what water resources organizations wanted. In the legislature, lobbyists could generally better protect client interests than if left to the mercy of "faceless bureaucrats." As water projects became increasingly controversial, lobbying intensified. Navigation and flood control interests were soon competing for federal dollars. Their umbrella lobbying organization, the Rivers and Harbors Congress, reconstituted itself as the Water Resources Congress at the beginning of the 1970s. Publicly, at least, the new name proclaimed a commitment to conservation and stewardship and not just development. This cosmetic change did not mask the

strains within the Water resources community. By the mid-1970s the navigation and flood control interests were going their separate ways on cost sharing. Even the navigation community was split. Some barge interests opposed all user fees, while others were inclined to accept what they believed was inevitable. Several port authorities objected to any port or harbor dues to offset operation and maintenance. Others agreed to the concept, but argued over the manner of assessment. For some, cost sharing was a challenge; for others, it was a shotgun wedding. The result of this acrimony was a decline in membership and influence of the Water Resources Congress and the growth of smaller, more focused, single purpose lobbying organizations.[67]

These new organizations wanted not only continued federal support but the same leverage once enjoyed by the national Rivers and Harbors Congress and the National Reclamation Association. But that age had passed. No longer could they count on such champions as Senator Kerr, Representative Wayne Aspinall of Colorado, or Senator Allen Ellender of Louisiana. Although some politicians remained committed to water resources development, more senators and representatives came to doubt the wisdom of both the projects and the level of federal funding required for the water resources program. They clearly were encouraged in this thinking by surprisingly effective environmental lobbying organizations, many of them recently organized.[68] The idea of passing more of the federal financial burden to states and communities attracted an increasing number of congressmen.

Chanaina Values and Expectations

Congress, not the bureaucracy or outside experts, remained the great arbitrator. After 150 years of water resources development, and a hodgepodge of statutes and executive orders, the United States still had no institutional framework for developing nationwide, comprehensive--water resource programs. Perhaps such institutional arrangements are impossible given the scale of operation and the physical area that are often involved. Especially difficult to resolve are issues that focus on the intangible and incommensurate values of public works projects. Different communities assign different weights to factors affecting social well being and the environment. The marketplace cannot readily translate such factors into monetary terms, nor can they be easily empirically verified. Consequently, they must be addressed in the political forum--the Congress of the United States.

Clearly, the Water Resources Council never had the influence envisioned by early 20th century reformers or New Deal planners. It had only limited capability to arbitrate disputes over, for example, the appropriate socio-economic objectives or specific purposes of a project.[69] Also, many of the largest water projects had either been built or were well *on* their way to completion, thereby undermining the Council's desire to insure rational Water resources management throughout a watershed area. Finally, an increasingly urbanized, educated society was not interested so much

in irrigation; navigation, or even flood control as in recreation, environmental preservation, and water quality. Passage of the Wilderness Act (1964), the Wild and Scenic Rivers Act (1968), and the National Environmental Policy Act (1969) testified to the strength of these new interests. Environmental and recreational concerns contributed to rising opposition to water projects, and many engineering plans were put back on the shelf.

The Corps of Engineers, the nation's largest water resources developer, bore the brunt of the criticism from opponents of water projects. Before the beginning of the environmental era, opposition generally centered around real estate issues created by the construction of large flood control dams. Corps reservoirs occasionally inundated prime agricultural land or scenic areas. In the early 1950s, for instance, Kansas farmers loudly protested the acquisition of fertile farmland in order to construct Tuttle Creek Dam. A decade later, real estate and environmental issues began merging, as exemplified by the Rampart Dam project in Alaska, the Cross-Florida Barge Canal, and Oakley Dam in Illinois. Critics described the Corps of Engineers as arrogant, elitist, and extravagant. Even supporters perceived miscalculation and inflexibility within the Corps. The Secretary of the Army's Civil Works Study Board published a report in 1966 that acknowledged the problem. It concluded that "the system has offered too little opportunity and incentive for planners to assume a comprehensive, long-range viewpoint and an inquiring attitude that would lead to consideration of all factors that might be pertinent to an optimum

solution."[70] The public meetings that have contributed to Corps planning in the last two decades may have addressed this problem, but have not eliminated the public's concern that Corps projects be both cost effective and environmentally and socially sensitive.

The public was not just suspicious about the Corps, but about government in general. According to one survey, the number of people who believed that "government is run by people who don't know what they're doing" climbed from 27 percent in the early 1960s to 63 percent in 1980.[71] The public increasingly believed that the federal bureaucracy was bloated and inefficient, that ill-conceived government spending contributed to the nation's economic decline, that too much was being done at the national level, and, in the words of President Reagan, that government was "taxing away the American way of life."[72] By 1980 four of five people thought the government wasted money, up from less than 50 percent 20 years before.[73]

Aside from environmental considerations and lack of confidence in government, concern over the federal budget also generated opposition to water projects. Beginning with the post-World War II construction boom, an increasing number of people questioned the level of federal funding for water resources projects. There were several reasons for this. First, while an immature industrial and agricultural base in the 19th century could not fund major water projects, by the mid-20th century many cities and states had the

capability to share the financial burden. Second, operating and maintaining water projects had become at least as important as building them, and nonfederal interests could often make important contributions in this regard. Third, an increasing number of projects were for local benefit, in which case it was entirely appropriate that the local beneficiaries pay for more of the cost.[74] Finally, and most important, other demands on the federal budget necesssitated searching for ways to reduce federal expenditures. Discretionary programs, such as water resources, became candidates for fiscal restraint at a time of demands for increased expenditures for the military (especially during the Vietnam conflict) and legislative reluctance to tamper with entitlement programs.

However, the need to rehabilitate or replace an aging water resources infrastructure was undeniable by the mid-1970s. The nation had approximately 3,000 unsafe dams, and a number of locks on the Ohio, upper Mississippi, and Columbia rivers were found to be too old (about 40 years), too deteriorated, and too small to serve modern shipping. The waterway problems appeared particularly urgent in light of the energy crisis. Both new locks and deeper ports were needed to handle the transportation and exportation of coal and other energy supplies.[75] With increasing demands on the federal budget and growing doubts about the wisdom of some expensive water projects, a way had to be found to eliminate

questionable projects while responding to legitimate water resources needs equitably and efficiently. The situation required innovation and a willingness to challenge and, where necessary, to change old ways of doing business.

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